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DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine: BLACK BIRD, Manganese — Date: April 23, 1943

District: Coyote (Coyote mine) — Engineer: Earl F. Hastings

Subject: Reconstruction Finance Corporation Mine Loan

Docket No.	Phx C-159
Date Application Received	March 12, 1943
Date of Field Examination	April 20, 1943
Date of Report	April 24, 1943

1. Name and address of applicant (correspondent):
Margaret Freilinger - Special, 414 South 4th Avenue, Tucson, Arizona.

2. Character of project and estimated cost thereof:
Manganese. Stripping, equipping and operating manganese mine.

3. Location of property:
Coyote Mining District, Pima County, Arizona.

4. Applicant's interest in or ownership of property:
Applicants hold bond and lease at $1.00 per ton royalty to apply on $10,000 purchase price. $30.00 per month minimum royalty.

5. Loan requested:
$5,000.00.

6. Loan recommended:
$5,000.00.

7. Comments:
(A) Added to the docket is a memorandum by G. A. Ballam, Field Engineer, Department of Mineral Resources, dated April 20, 1943.

(B) The property is not well developed, like most manganese properties, but appears to have ample ore exposed by surface work to warrant more than passing consideration.

(C) According to the Ballam memorandum both 30% low grade and plus 35% ore can be shipped in some quantity. The 30% ore would be marginal, returning only $13.50 per ton f.o.b. Deming, New Mexico. With some portion of the mined ore qualifying as high grade, and considering the low production cost which should be obtained on this property, a small profit should be made.

(D) It is noted that shipments heretofore made have not equalled anticipated value based on samples taken by the applicant. It can, therefore, be assumed that the assay values as shown with the percentages in the forties do not represent average shipping ore. They are indicative, however, of the sorting characteristics of the mined material.

(E) Management of the enterprise is possibly the most doubtful and detrimental feature of this application. On a marginal operation, such as this is bound to be, the entire success rests on careful and effective management. On the assumption that the applicants can operate with some degree of efficiency this loan is recommended.

ARIZONA DEPARTMENT OF MINERAL RESOURCES

Earl F. Hastings, Projects Engineer

RECONSTRUCTION FINANCE CORPORATION

MINING DIVISION

REPORT OF SUPERVISING ENGINEER

Docket No. ND-8173 . .Margaret Freilinger
414 South 4th Ave.
Tucson, Arizona
Date authorization for Examination
Received . . . . .April 27, 1943
Date of Examination,
Inclusive . . . . . May 7, 1943
Date of Report . . . . . May 24, 1943

1. NAME AND ADDRESS OF APPLICANT

MARGARET FREILINGER
414 South 4th Avenue
Tucson, Arizona

Correspondent: Same

Black Bird Mine
formerly "Coyote"

2. CHARACTER OF PROJECT

Development of Manganese Deposit

3. LOCATION OF MINE

The mine is located in the Coyote Hills on the Papago Indian Reservation in Pima County, Arizona. Tucson, the nearest rail point and supply center, is 42 miles easterly by road from the Mine. The road is practically level and is paved for thirty-four (34) miles from Tucson. The balance of the road is hard surfaced, except the last mile to the mine which is sandy in places. The road is passable at all seasons.

4. APPLICANT

The applicant is a young woman who is employed at clerical work in the County Office. The original lease with option to purchase was granted to E. J. Freilinger, the father of the applicant. A new agreement was entered into naming Margaret Freilinger as lessee following a serious injury sustained by Mr. Freilinger while trucking ore from the property. Mr. Freilinger is now recovered and plans to manage the proposed development. He is an elderly man who for twenty (20) years was a building contractor in the vicinity of Tucson. During the past fifteen (15) years he has been interested in mining, chiefly in small scale development enterprises of a promotional nature. Latterly his daughter has been associated with him in this work. The applicant was not present at the time of the examination. The lease agreements referred to above are included with the data supporting the application.

5. LOAN REQUESTED

$5,000.00

6. DESCRIPTION OF PROJECT

A. General Features

(1) There are no mine workings, mill or other appurtenances which are no confined within the applicant's ownership.

(2) The project would comply with the State Compensation and Safety-First Statutes.

(3) There are no apparent legal discrepancies in the project.

(4) There are no impeded right-of-way facilities.

(5) There is no likelihood of surface or sub-surface trespass during the project.

B. Existing Development

(1) Mine is opened by surface cuts.

a. The sketch accompanying this report is made from a compass and tape survey.

b. Samples were cut with pick and moil and gathered on canvas.

c. General Features of Deposit, etc.:-

The property comprises two (2) claims and is held by Mr. A. M. Herreras on a rental basis from the Papago Indian Reservation. The applicant is operating under agreement with Mr. Herreras.

The country rock in the immediate locality of the property is andesite and the manganese occurs in a sheeted zone in the andesite. Considerable float manganese and much manganese staining is present on the crests and gentle slopes of several low hills. The more important mineralized zone is several hundred feet wide and a thousand or more feet in length in the direction of the fracturing which is about N. 30 W., with an 80° dip N.E. The best ore showing lies on the northwest half of "Blackbird No. 1 Claim" where a series of more intensely mineralized fractures has been opened by a cut some 75' long and averaging about 6' in depth. A shaft (inaccessible) is sunk in the bottom of the cut to a depth of 28'.

Shipments from the property totals seventy-two (72) tons, all mined from the above workings. Two shipments of eleven (11) tons each were sent to the Metals Reserve

Stockpile at Phoenix, but the material was refused at that point because it assayed 29 - 30% MnO which was well below the minimum acceptable grade (35%). This material was later shipped to a custom mill near Winkleman with unsatisfactory results. Another lot totalling fifty (50) tons was shipped to the low grade stockpile at Deming, New Mexico. This material, which was shipped by a sub-lessee, assayed 22% MnO.

The Manganese occurs as psilomelane and pyrolusite, the former predominating. While some high-grade samples can be picked out the general run of mine material is low-grade and not susceptible to close sorting. The shipment which was made to Phoenix represented sorting of ore mined from the best showing. The later shipment of fifty (50) tons assaying 22% MnO was the product after some sorting. Sample No. 8 represents a pile of about fifteen (15) tons of sorted ore on top of the dump. The balance of the scattered material amounting to about one hundred (100) tons all contains MnO and is estimated to run between 5 and 10% MnO. The ratio of sorting, therefore, is somewhat less than one (1) ton of 22% plus ore against two (2) tons of material mined. The shape of the cut and the location of the samples is indicated on the attached sketch. The average width and weighted average of MnO content of the samples, excluding No. 8 (dump) is:

Width	% MnO
66"	16.69

While the cut has been made along the most favorable trend of mineralization, the walls of the cut contain MnO in some cases equal in amount to that shown in the cut. There were no ladders in the shaft but the mineralization could be seen to continue to the bottom of the shaft.

Immediately northwest of the long cut several trenches and pits indicate that mineralization continues in this direction for at least 50' with about the same MnO content as in the cut.

As noted above the surface area of mineralization is quite extensive and many scattered cuts show fair amounts of MnO, though not approaching the values shown in the developed area.

The shipping record together with the size and quality of the dump and the assays

obtained during the examination indicates that a large volume of low-grade manganese bearing material is available here. A grade of ore similar to that of the fifty (50) ton lot which was shipped to Deming, or 22% MnO, would appear to be about the practical limit of a sorted product. If material of this grade were shipped to the Deming stockpile the value per long ton at the mine would work out about as follows:

Payment for 22% MnO		$8.14
Less: Freight-Tucson to Deming . . .	$2.46	
Unloading at Deming.	.70	
Trucking to Tucson.	2.00	5.16
Value at Mine		$2.98

While the mineralized area is quite extensive, the proven width of material capable of yielding a sorted product running 22% MoO_3 is not large and it would not be possible therefore to mine by large open cut method. The cost for selective underground mining is estimated at $4.00 per long ton or; allowing for sorting, about $5.00 per long ton of ore shipped.

From the above calculations and estimate it is apparent that the project would not be economical at present prices for MnO.

Milling of the ore on the property does not seem practical in view of the fact that the manganese, partly as pyrolusite, occurs intimately mixed with country rock.

7. COMMENTS OF SUPERVISING ENGINEER

There appears to be a large amount of low-grade manganese in the claims of the applicant. The work which has been done to date indicates, however, that even with very close sorting, the material mined from the most favorable location cannot be sorted to a high-grade shipping product. Also, the grade of material which can be practically obtained by sorting is too low to be handled economically at the low grade stockpile at Deming, New Mexico.

A development loan is not recommended.

~~USRQE~~ 1

Docket No ND-8173
Date Auth for Exam Rec'd 4/27/43
Date of Exam mid. 5/7/43
Date of Report.

1 Name and Address of Applicant
Name Margaret Freilinger
Address 414 S. 4th Ave
City & State Tucson Arizona

Name of Correspondent Same

2 Character of Project
Development of Manganese deposit.

3 Location of Mine
The mine is located in the Coyote hills in the Papago Indian Reservation in Pima County, Arizona. Tucson, the nearest rail point and supply center is 42 miles easterly by road from the mine. The road is partially hard and is paved for 34 miles from Tucson. The balance of the road is hard surfaced, except the last mile to the mine which is sandy in places. The road is passable at all seasons.

4 Applicant

The applicant is a young woman who is employed at clerical work in the County Office. The original ~~intent~~ Lease with Option to purchase agreement was granted to ~~Miss~~ E. J. Freilinger, the father of the applicant. A new agreement was entered into naming Margaret Freilinger as lessee following a serious injury sustained by Mr. Freilinger while trucking ore from the property. Mr. Freilinger is now recovered and plans to manage the proposed development. ~~He is an elderly and was a building contractor in the Tucson area for many years some 20 years and but for the past 20 until about 15 years ago, and for the past 15 years has been interested~~ He is an elderly man ~~and~~ who for 20 years was a building contractor in the ~~Tucson region~~ vicinity of Tucson. During the past 15 years he has been interested in mining, chiefly in small scale development enterprises of a promotional nature. Latterly his daughter has been ~~interested with him~~ associated with him in this work. The applicant was not present at the time of the examination. ~~Because agreement as submitted and with the application a later agreement~~ The lease agreements referred to above

are included with the data supporting the application.

5 Loan Requested
$ 5000

6 Description of Project
A. General Features
1. There are no mine workings, mill or other appurtenances which are not confined within the applicants ownership.
2. The project would comply with State compensation and safety-first statutes.
3. There are no apparent legal discrepancies in the project.
4. There are no impeded right-of way facilities.
5. There is no likelihood of surface or sub-surface trespass during the project

B. Existing Development
1. Mine is opened by surface cuts
a. The sketch accompanying this report is made from a compass and tape survey.
b. Samples were cut with pick and mail and gathered

on canvas.

d. General Features of Deposit etc.

The property comprises 2 claims and is held by Mr. R. M. Herreras on a rented basis ~~agreement~~ from the Papago Indian Reservation. The applicant is operating under agreement with Mr. Herreras

The country rock in the immediate locality of the property is andesite and the manganese occurs in a sheeted zone in the andesite. Considerable float manganese and much manganese staining is present on the crests and gentle slopes of several low hills. The more important mineralized zone is several hundred feet wide and a thousand or more feet in length in the direction of the fracturing which is about N 30 W with 80° dip NE. The best ore showing lies in the northwest half of Blackbird No 1 claim where a series of more ~~more~~ intensely mineralized fractures has been opened by a cut some 75 feet long and averaging about 6 feet in depth. A shaft (inaccessible) is sunk in the bottom of the cut to a depth of 28 feet.

Shipments from the property totals 72 tons, all mined from the above workings.

up to a grade of 35% MnO and assay-
ment of

Mr. R. Two shipments of 11 tons each were sent to the
United Reserve stock pile at Phoenix but
the material
was refused at that point because it
assayed 29-30% MnO which was well
below the minimum acceptable grade (35%).
at that point. This material was later
shipped to a custom mill near Nicklemon but
with unsatisfactory results. Another lot
totaling 50 tons was shipped to the
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a sub-lessee, assayed 22% MnO.

epidote and
Manganite

The manganese occurs as psilomelane
with a little and pyrolusite, the
former predominating. While some
high grade samples can be picked out
the general run of mine material is low grade and
shipment assaying 29% to MnO is
representative of the best that can be
obtained by sorting. the [redacted]
mine material is not susceptible
to close sorting. The shipment
which was made to Phoenix represented
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showing. The later shipments of 50 tons assaying
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pile of sorted ore on top of the dump. The
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to run between 5 and 10% MnO. The
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2 tons ~~removed from~~ of material
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location of the samples is indicated on
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the samples, excluding No 8 (dump) is:

width	% MnO
66"	16.69

While the cut has been made along the
most favorable trend of mineralization
the walls of the cut ~~are approachable~~ contain MnO
in some cases equal in amount to that shown
in the cut. There were no ladders in the
shaft but the mineralization could be seen to
continue to the bottom of the shaft.
Immediately northeast of the long cut
several trenches and pits indicate
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As noted above the surface area of
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zone is quite extensive and many scattered cuts
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approaching the developed area.
The shipping record together with the
size and quality of the dumps and the
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indicates that a large volume of

low grade manganese bearing material is available here. A grade of ore similar to that of the 50 ton lot which was shipped to Deming pile, or 22% MnO, would appear to be about the practical limit of a sorted product.

Mr P ~~If material of this grade~~ were shipped to the ~~Deming~~ stockpile ~~the~~ value per long ton at the mine would work out about as follows:

Payment for 22% MnO	~~$8.14~~	$8.14
Less: Freight—Truck to Deming	$2.46	
Unloading at Deming	.70	
Trucking to Tucson	2.00	
		5.16
Value at Mine		2.98

While the mineralized area is quite extensive the proven width of ~~ore of the~~ material capable of yielding a sorted product running 22% MnO_2 is not large ~~it would be~~ and it would not be possible therefore to mine it by large open cut method. ~~Under the~~ cost for selective underground mining is estimated at $4.00 per long ton or, allowing for sorting, about $5.00 per long ton of ore shipped.

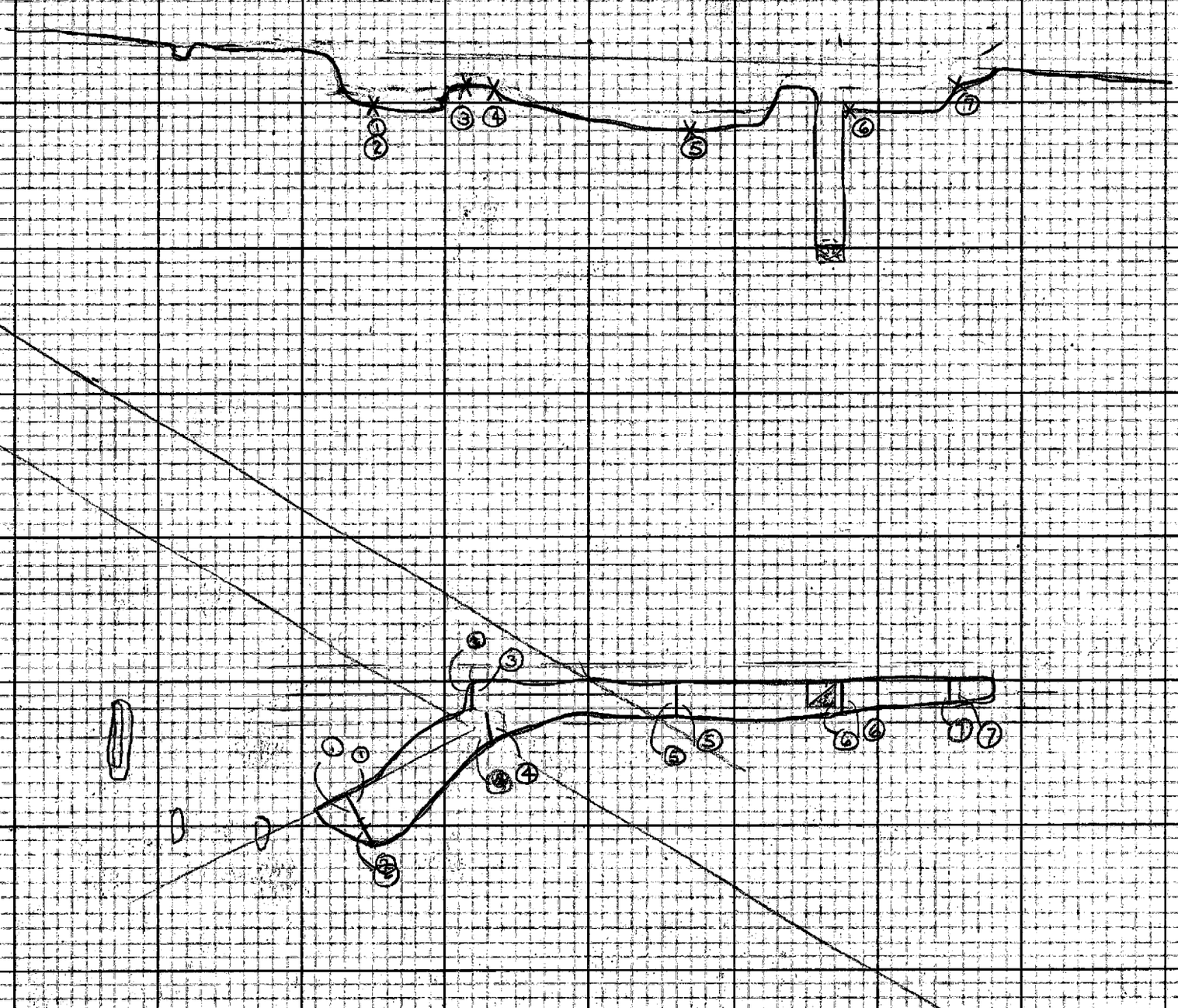
From the above calculations and estimates it is apparent that the project would not be economical at present prices for MnO.

Milling of the ore on the property does not seem practical in view of the fact that the manganese, as pyrolusite, occurs intimately mixed with country rock.

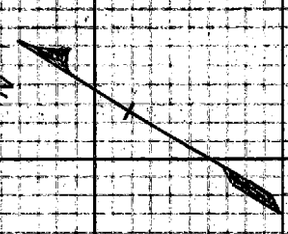
Comments of Supervising Engineer

There appears to be a large amount of low grade manganese in the claims of the applicant. The work which has been done to date indicates however that, even with very close sorting, the material mined from the most favorable location cannot be sorted to a high grade shipping product. Also, the grade of material which can be practically obtained by sorting is too low to be handled economically at the low grade stock pile at Deming, New Mexico.

A development loan is not recommended.



Sample	Width	%MnO
NO. 1	68"	14.66
2	39"	9.59
3	43"	16.67
4	48"	25.38
5	46"	17.85
6	50"	16.38
7	38"	15.49
8	Dump	23.91



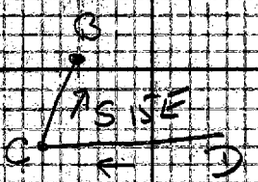
DOCKET NO. ND-8173

MARGARET FREILINGER

Scale: 1" = 20'

Samples X — ①

T.P.L.


B
NE
C
D
SW